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| Name: | Date: |
| Course/Subject: Keystone Algebra II | Team: Math Department |
| Topic: VI Data Analysis | School District: Blue Mountain |

Key Learning: Analyze data to determine an appropriate regression model to make predictions and calculate the probability of a compound event.

Unit Essential Question: How do we analyze data to determine an appropriate regression model to make predictions and calculate the probability of a compound event?

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| Concept: Construct a scatter plot and determine a line of best fit (lines and curves) | Concept: Make predictions using the regression model | Concept: Solve problems involving counting principles as they relate to probability |
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| Lesson Essential Questions:   * How do we fit an appropriate regression model to a linear or curvi-linear graph? * How do the manual and technological processes differ? (ET) | Lesson Essential Questions:   * How do we analyze a regression model to predict data? * Why is the original range of the data useful in making a prediction? (ET) | Lesson Essential Questions:   * How are counting principles used to find a probability? * Why is the tree-diagram an incorrect tool for some counting principle problems? (ET) |
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| Vocabulary:   * scatter plot * line of best fit | Vocabulary:   * regression model | Vocabulary:   * factorial * permutation * combination * Fundamental Counting Principle |
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| Additional Information/Resources: We will be using the graphing calculator to explore scatter plots and make inferences about probability. Also Microsoft Excel can be used here. | | |

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| Concept: Calculate the probability of independent, dependent, and compound events. | Concept: | Concept: | Concept: | Concept: |
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| Lesson Essential Questions:   * How do we calculate the probability of a compound event? * How can a Venn diagram be incorporated into a probability problem? (ET) | Lesson Essential Questions: | Lesson Essential Questions: | Lesson Essential Questions: | Lesson Essential Questions: |
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| Vocabulary:   * dependent * independent | Vocabulary: | Vocabulary: | Vocabulary: | Vocabulary: |